Methods and apparatus for restructuring debt obligations

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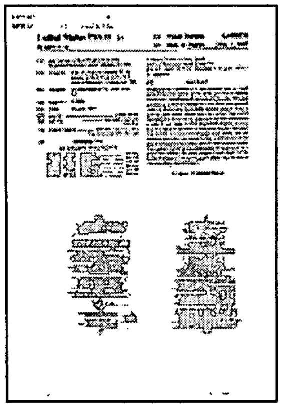
Patent summary



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Abstract | Drawing | Description | Claims

Abstract
Methods and apparatus for restructuring one or more debt obligations issued in the form of interest-bearing bonds into a serial issue of zero coupon bonds. The data processing system evaluates the cash flows and present value of an existing bond, then creates a serial issue of zero coupon bonds which provides pretax cash flows equivalent to those of the existing bond and determines a table of call yields for the serial issue of zero coupon bonds to replace the table of call prices for the old bond. The system evaluates the after-tax cash flows, and determines the after-tax present value to the issuer of the existing bond and the serial issue of zero coupon bonds. The system periodically determines the potential savings from calling the zero coupon bond issue, or selected bonds from the series, and refinancing the debt at the prevailing interest rates.

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Claims

What is claimed is:

1. A data processing system for implementing a debt-for-debt exchange to restructure an issuer's existing debt issue into a serial issue of callable zero coupon bonds so that debt service payments after the exchange are substantially equivalent to debt service payments prior to the exchange, said existing debt issue and said serial issue of callable zero coupon bonds each having a respective sequence of cash payment obligations, a respective present value, and a respective cost of calling, said exchange occurring on a settlement date, said method comprising:

means for entering parameters which define the existing debt issue, said parameters including a maturity date and a table of call price values;
means for analyzing one or more of said parameters to determine the issuer's cash payment obligations for each of a succession of payment periods from the settlement date of said exchange to the maturity date of the existing debt issue;
means for determining a face value for each maturity of the serial issue of callable zero coupon bonds so that the sequence of cash payment obligations associated with the serial issue of callable zero coupon bonds is substantially equivalent to the sequence of cash payment obligations of said existing debt issue and so that the present value of said serial issue of callable zero coupon bonds equals the present value of said existing debt issue;
means for transforming the table of call price values for the existing debt issue into a table of call yield values for the serial issue of callable zero coupon bonds so that the cost of calling the entire serial issue of callable zero coupon bonds is substantially the same as the cost of calling the existing debt issue at any data on which the existing debt issue can be called; and
means for printing certificates evidencing each separate bond issue in the new serial issue of callable zero coupon bonds and for printing the table of call yield values for the new seria issue of callable zero coupon bonds.

2. A data processing method for implementing a debt-for-debt exchange to restructure an issuer's existing debt issue into a serial issue of callable zero coupon bonds so that debt service payments after the exchange are substantialy equivalent to

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364/408; 364/715; 235/379

International Classification
G06F 1530

Search within this patent

Search

Citations

Patent Number	Title	Issue date
3946218	General purpose calculator with capability for performing yield-to-maturity of a bond calculation	Mar 23, 1976
4055757	Calculator apparatus with annuity switch for performing begin-and end-period annuity calculations	Oct 25, 1977
4194242	Method and system for determining interest rates	Mar 18, 1980
4232367	Apparatus for maximizing interest earnings and providing payments from principal without interest penalty	Nov 4, 1980
4321672	Financial data processing system	Mar 23, 1982

debt service payments prior to the exchange, said existing debt issue and said serial issue of callable zero coupon bonds each having a respective sequence of cash payment obligations, a respective present value, a respective cost of calling, a respective market value, and respective after-tax cash flows, said exchange occurring on a settlement data, said method comprising the steps of:

entering parameters which define the existing debt issue, said parameters including a maturity date and a table of call price values;
analyzing one or more of said parameters to determine the issuer's cash payment obligations for each of a succession of payment periods from the settlement date of said exchange to the maturity date of the existing debt issue;
determining a face value for each maturity of the serial issue of callable zero coupon bonds so that the sequence of case payment obligations associated with the serial issue of callable zero coupon bonds is substantially equivalent to the sequency of cash payment obligations of said existing debt issue and so that the present value of said serial issue of callable zero coupon bonds equals the present value of said existing debt issue;
transforming the table of call price values for the existing debt issue into a table of call yield values for the serial issue of callable zero coupon bonds so that the cost of calling the entire serial issue of callable zero coupon bonds is substantially the same as the cost of calling the existing debt issue at any date on which the existing debt issue can be called; and
printing certificates evidencing each separate bond issue in the new serial issue of callable zero coupon bonds and for printing the table of call yield values for the new serial issue of callable zero coupon bonds.

3. The method of claim 2, further comprising;

evaluating the market value of the serial issue of callable zero coupon bonds;
evaluating said after-tax cash flows of the existing debt issue to determine a present value for the after-tax cash flows of the existing debt issue which occur after the settlement date;
calculating a net present value of the debt-for-debt exchange by subtracting said market value from said present value.

4. The method of claim 2, further comprising:

evaluating, for each zero coupon bond in said serial issue of callable zeo coupon bonds, any potential savings to be gained by calling the bond for redemption and refinancing at prevailing interest rates.

4486849	Computer for calculating compound interest	Dec 4, 1984

Referenced by

Patent Number	Title	Issue date
4739478	Methods and apparatus for restructuring debt obligations	Apr 19, 1988
4752877	Method and apparatus for funding a future liability of uncertain cost	Jun 21, 1988
5187801	Massively-parallel computer system for generating paths in a binomial lattice	Feb 16, 1993
5237500	System and process for converting constant dollar financial instruments	Aug 17, 1993
5689649	System for operation of a combination mortgage, equity load and savings plan	Nov 18, 1997
5704045	System and method of risk transfer and risk diversification including means to assure with assurance of timely payment and segregation of the interests of capital	Dec 30, 1997
5742775	Method and apparatus of creating financial instrument and administering an adjustable rate loan system	Apr 21, 1998
5812988	Method and system for jointly estimating cash flows, simulated returns, risk measures and present values for a plurality of assets	Sep 22, 1998
5870720	Method for implementing a restructuring exchange of an excessive undivided debt	Feb 9, 1999
5878404	System and method for managing the amortization of a loan	Mar 2, 1999
5933815	Computerized method	Aug 3, 1999

	and system for providing guaranteed lifetime income with liquidity	
5991741	In$ite: a finance analysis model for education	Nov 23, 1999
6148293	Method and apparatus of creating a financial instrument and administering an adjustable rate loan system	Nov 14, 2000
6161098	Method and apparatus for enabling small investors with a portfolio of securities to manage taxable events within the portfolio	Dec 12, 2000
6336103	Rapid method of analysis for correlation of asset return to future financial liabilities	Jan 1, 2002
6338047	Method and system for investing in a group of investments that are selected based on the aggregated, individual preference of plural investors	Jan 8, 2002
6360210	Method and system for enabling smaller investors to manage risk in a self-managed portfolio of assets/liabilities	Mar 19, 2002
6516303	Method, system, and apparatus for managing taxable events within a portfolio	Feb 4, 2003
6601044	Method and apparatus for enabling individual or smaller investors or others to create and manage a portfolio of securities or other assets or liabilities on a cost effective basis	Jul 29, 2003
6604080	Computer system and methods for supporting workers' compensation/employers liability insurance	Aug 5, 2003
6647375	Risk reduction system	Nov 11, 2003
6735573	Lease termination method	May 11, 2004

6801199	Method and apparatus for interacting with investors to create investment portfolios	Oct 5, 2004
6996539	Method and apparatus for enabling smaller investors or others to create and manage a portfolio of securities or other assets or liabilities on a cost effective basis	Feb 7, 2006
7047218	Method and apparatus for trading securities or other instruments on behalf of customers	May 16, 2006
7110971	Method and apparatus for enabling individual or smaller investors or others to create and manage a portfolio of securities or other assets or liabilities on a cost effective basis	Sep 19, 2006
7117176	Method and apparatus for enabling individual or smaller investors or others to create and manage a portfolio of securities or other assets or liabilities on a cost effective basis	Oct 3, 2006